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AN OBSERVATION OF ANTICREPUSCULAR RAYS

By JOHN G. ALBRIGHT

[Case School of Applied Science, Cleveland, Ohio, October 1936]

On the evening of September 14, 1936, the writer had the privilege of observing, near Mount Sterling, Ohio, an unusual phenomenon in connection with sunset. About 5 minutes after sunset, pale yellowish bands across the sky were noticed, which seemed to converge at a point opposite to the setting sun. In general appearance, the sky was clear overhead and in the east; there was, however, a slight haze in the upper atmosphere. A few clouds were visible on the western horizon in the direction of the sun, but the bands were not noticeable in that direction. In the eastern sky the bands were quite distinct and lasted for about 15 minutes. At first sight, the impression was conveyed that the sun was in the east and was in some manner obscured just above the horizon.

Fortunately, a camera, equipped with an orange filter, which the writer had been using to photograph cloud formations, was at hand and two pictures were obtained at an interval of about 5 minutes. Careful examination will disclose that the point of convergence in figure 1 is

near the top of the small tree which stands between the house and the barn; figure 2, which was taken about 5 minutes later, shows the point of convergence slightly above the tree.

These bands were the anticrepuscular rays caused by the scattering of sunlight in the upper atmosphere, the dark streaks being the parts shaded by the clouds on the western horizon.¹ Since the rays of the sun which enter the earth's atmosphere are practically parallel, the point of apparent convergence of the bands is merely the "vanishing point" for the parallel bands formed by the sun's rays. It follows, then, that the sun, the observer, and the point of apparent convergence are in the same straight line, and that this point of apparent convergence is the antisolar point. Since the sun had already set, the point of apparent convergence was above the horizon as shown in both photographs.

¹ W. J. Humphreys, *Physics of the Air*, 2 ed., p. 434.